MIDMARK®

Side Delivery Unit Installation Guide

CE 0088

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MOUNTING LOCATION

Figure 1 shows the recommended mounting location for the side delivery unit. Verify desired position (ex. RH / LH) with proper personnel before installation.

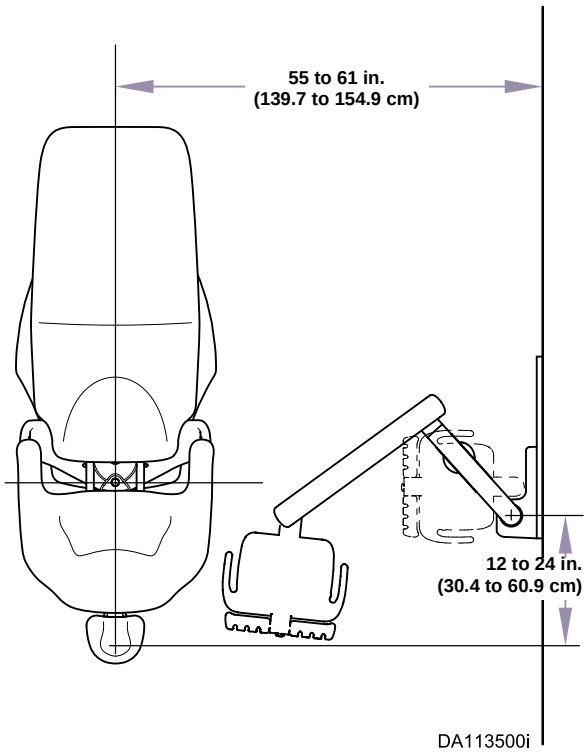

Figure 1. Recommended Mounting Location

MOUNTING REQUIREMENTS

Mounting Structure

The mounting structure must be capable of supporting the weight / torque listed below without deflection:

Unit / Arm Assembly

Weight (Max.).....50 lbs (22.6 kgs)
Torque (Max.)..... 170.8 ft-lbs (231.5 N•M)

To prevent the unit from drifting, the mounting plate must deflect no more than 1/16” (1.6 mm) over a 12” (30.5 cm) distance.

Cabinet Size (Cabinet mtd. units only)

Figure 2 shows minimum cabinet size requirements for the side delivery unit.

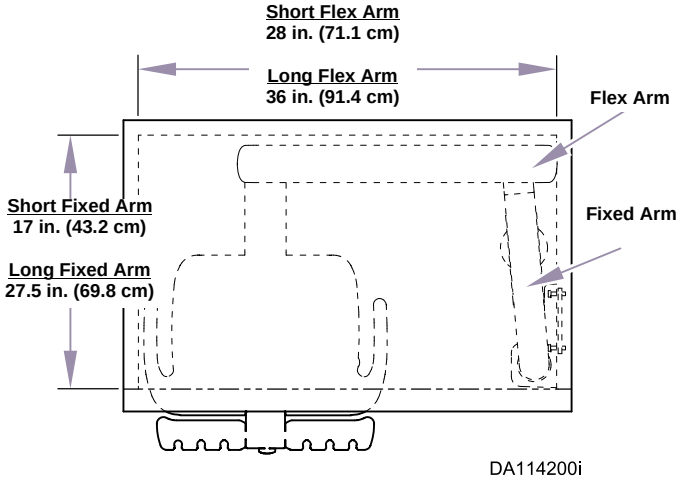

Figure 2. Cabinet Size Requirements

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REGULATOR INSTALLATION

Air Regulator

(1) Insert air regulator assembly (1, Figure 3) into air shut-off valve (2) as shown.

(2) Tighten compression nut (3).

Water Regulator

(3) Insert water regulator assembly (4) into water shut-off valve (5) as shown.

(4) Tighten compression nut (6).

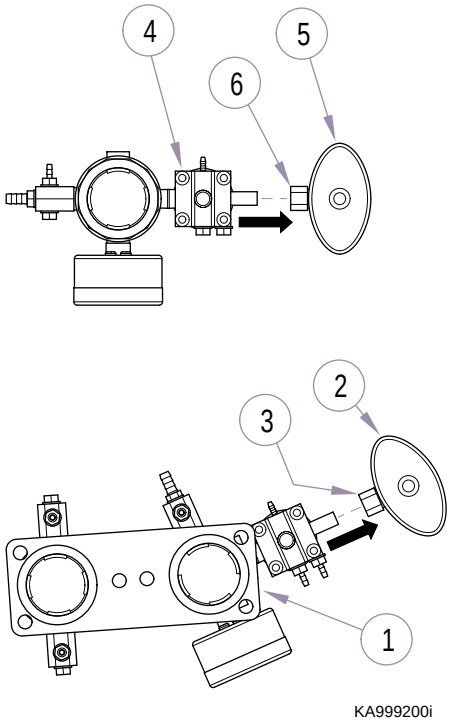


Figure 3. Regulator Installation

CABINET MOUNT BRACKET INSTALLATION *(Cabinet Mtd. Units only)*

Positioning

> **NOTE**
> The following step is not necessary for Midmark Freestanding Center Console cabinets. The holes for the bearing plate are pre-drilled & threaded.

(1) Mark four mounting holes for bearing plate. ***[See Figure 4];*** then drill holes using a 5/16” drill bit.

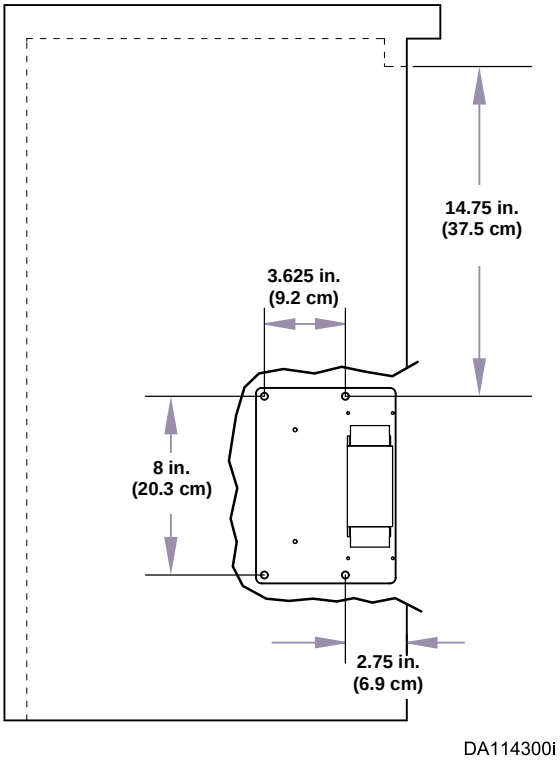


Figure 4. Bearing Plate Location

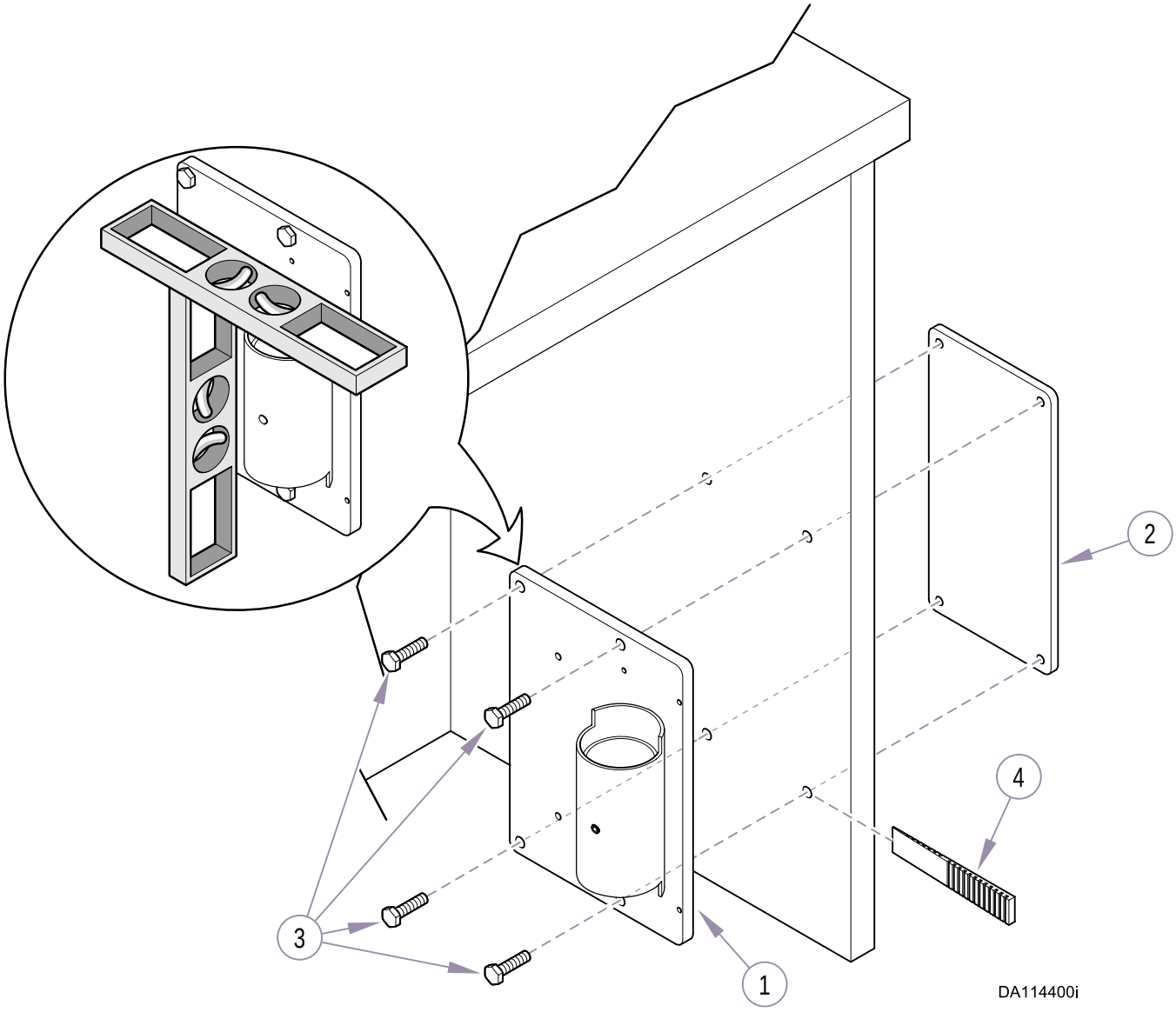


Figure 5. Bearing Plate Installation *(cabinet mtd. units)*

Bearing Plate Installation

(2) Align holes in bearing plate (1, Figure 5) with holes drilled in step 1; hold in place.

NOTE
Backing plate is not required when installing onto Midmark Freestanding Center Console cabinet.

(3) Position backing plate (2) on opposite side of cabinet wall and align mounting holes; hold in place

NOTE
There are two sets of mounting screws (3) provided. Use the appropriate length screws *[1" or 2 1/4"]* for the cabinet material.

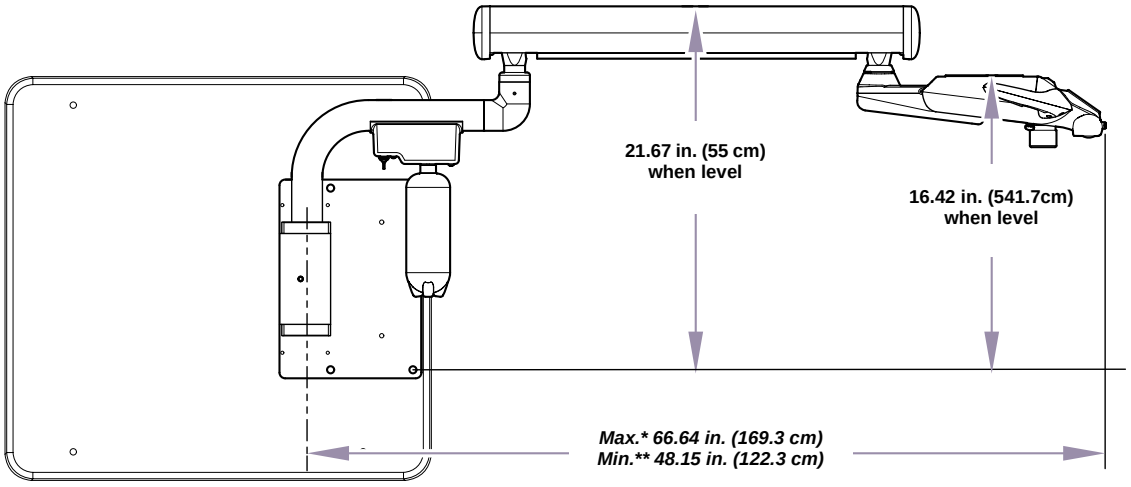
(4) Install four screws (3).

(5) Place a level on bearing plate (1). If necessary, loosen four screws (3) and install shims (4); tighten screws (3). Repeat until level.

WALL MOUNT BRACKET INSTALLATION *(Wall Mtd. Units only)*

Positioning (see Figure 6)

NOTE
Wall mounted units may be mounted at any height. Verify mounting position with proper personnel.



** Measurement w/long fixed arm & long flex arm (Standard w/wall mtd. unit)*
*** Measurement w/ short fixed arm & short flex arm*

NOTE: Product can be configured to use either fixed arm w/ either flex arm

Figure 6. Positioning Wall Mounted Side Delivery Unit

Frame Installation

(1) Locate wall studs.

EQUIPMENT ALERT
Align mounting holes with wall studs. Failure to do so could cause delivery unit to fall, damaging unit and wall structure.

(2) Mark eight mounting holes for frame (1, Figure 7); then drill pilot holes using a 5/16” drill bit.

(3) Secure frame (1) to wall with eight lag screws (2) and eight washers (3).

(4) Position frame cover (4) over frame (1) and secure with four screws (5).

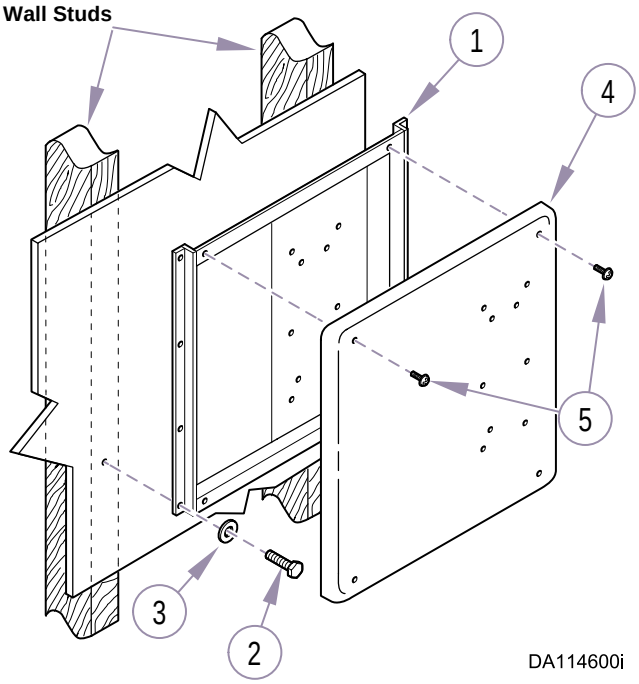


Figure 7. Frame Installation

Bearing Plate Installation

(5) Align mounting holes in bearing plate (1, Figure 8) and frame cover (2).

(6) Secure bearing plate (1) to frame cover (2) with four screws (3).

(7) Place a level on bearing plate (1). If necessary, loosen four screws (3) and install shims (4); tighten screws (3). Repeat until level.

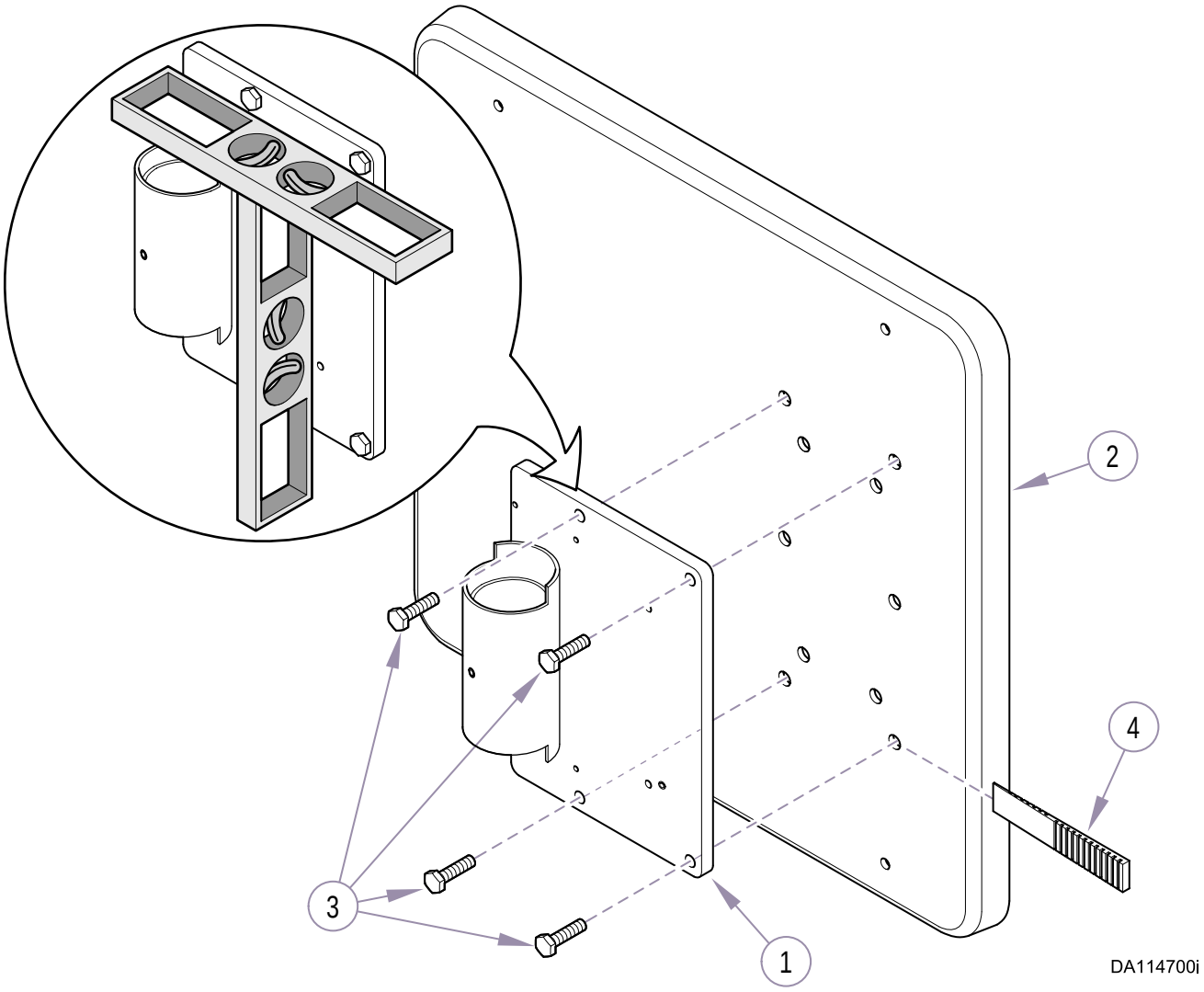


Figure 8. Bearing Plate Installation *(wall mtd. units)*

UNIT ARM INSTALLATION

(Cabinet & Wall Mtd Units)

(1) Loosen set screw (1, Figure 9).

(2) Apply lubricant ***[included]*** to fixed arm (2) as shown.

EQUIPMENT ALERT

Secure all pivot pionts when installing unit arm. Failure to comply could result in damage to delivery unit.

(3) Route umbilical tubing down thru bearing (3); then slide fixed arm (2) into bearing.

(4) Adjust drag by loosening / tightening set screw (1).

(5) Trim corrugated umbilical sleeving (4) to desired length; then slide over umbilical tubing.

(6) Slide umbilical retainer (5) over corrugated umblical sleeving (4); then secure retainer with two screws (6).

(7) Install bearing cover (7) and secure with two screws (8).

(8) Install water bottle (9).

(9) Route umbilical tubing to air / water regulators. Bushings are included, use as needed.

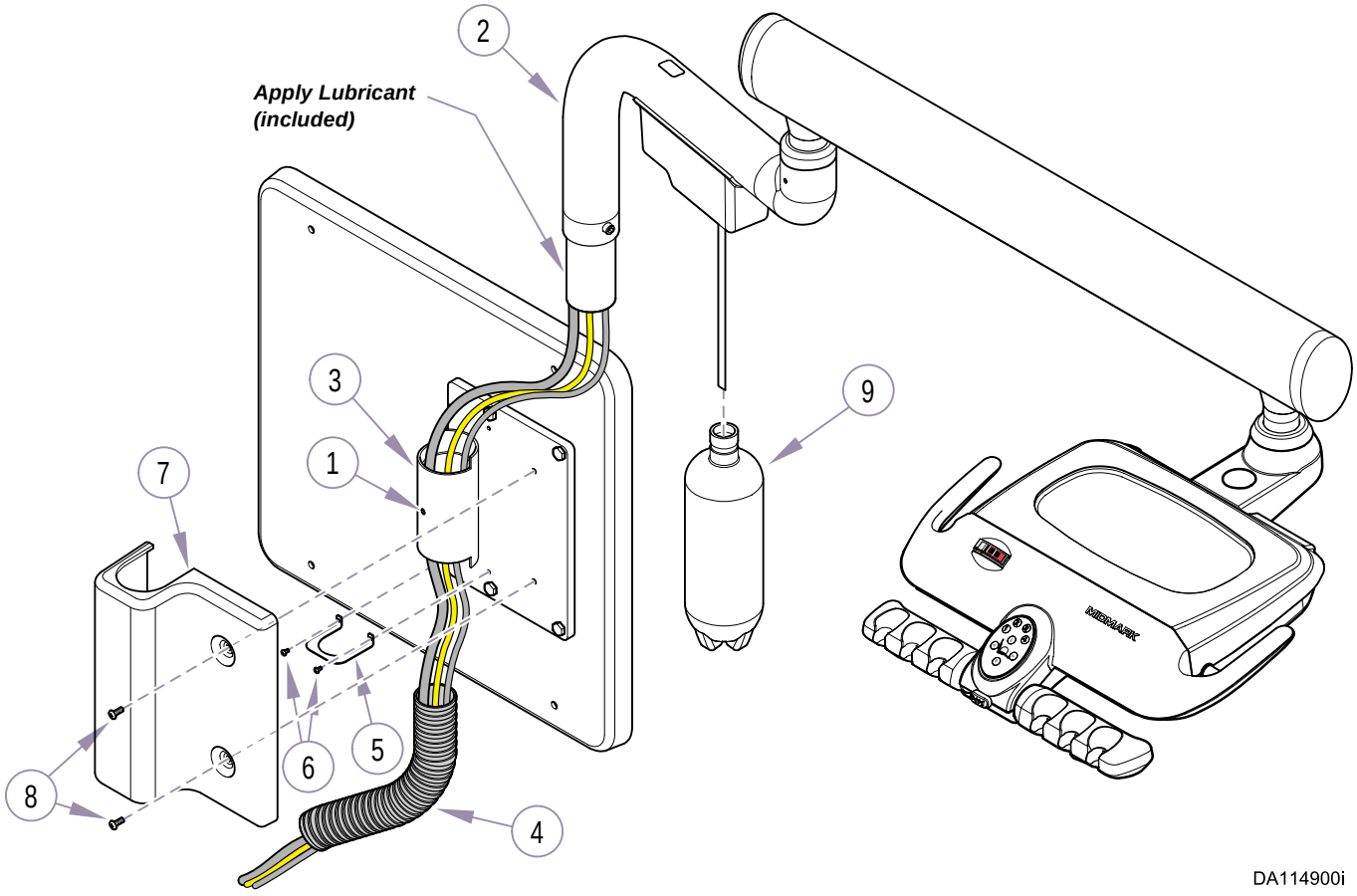


Figure 9. Unit Arm Installation *(wall mount shown)*

TUBING CONNECTIONS

(1) Access air/water/vacuum connections.

(2) Connect tubing as shown in **Figure 10**. Use proper connectors where required. (Refer to ***Tubing Connectors*** section).

NOTE
Bushings are included for routing foot control tubing into cabinet. Use as necessary.

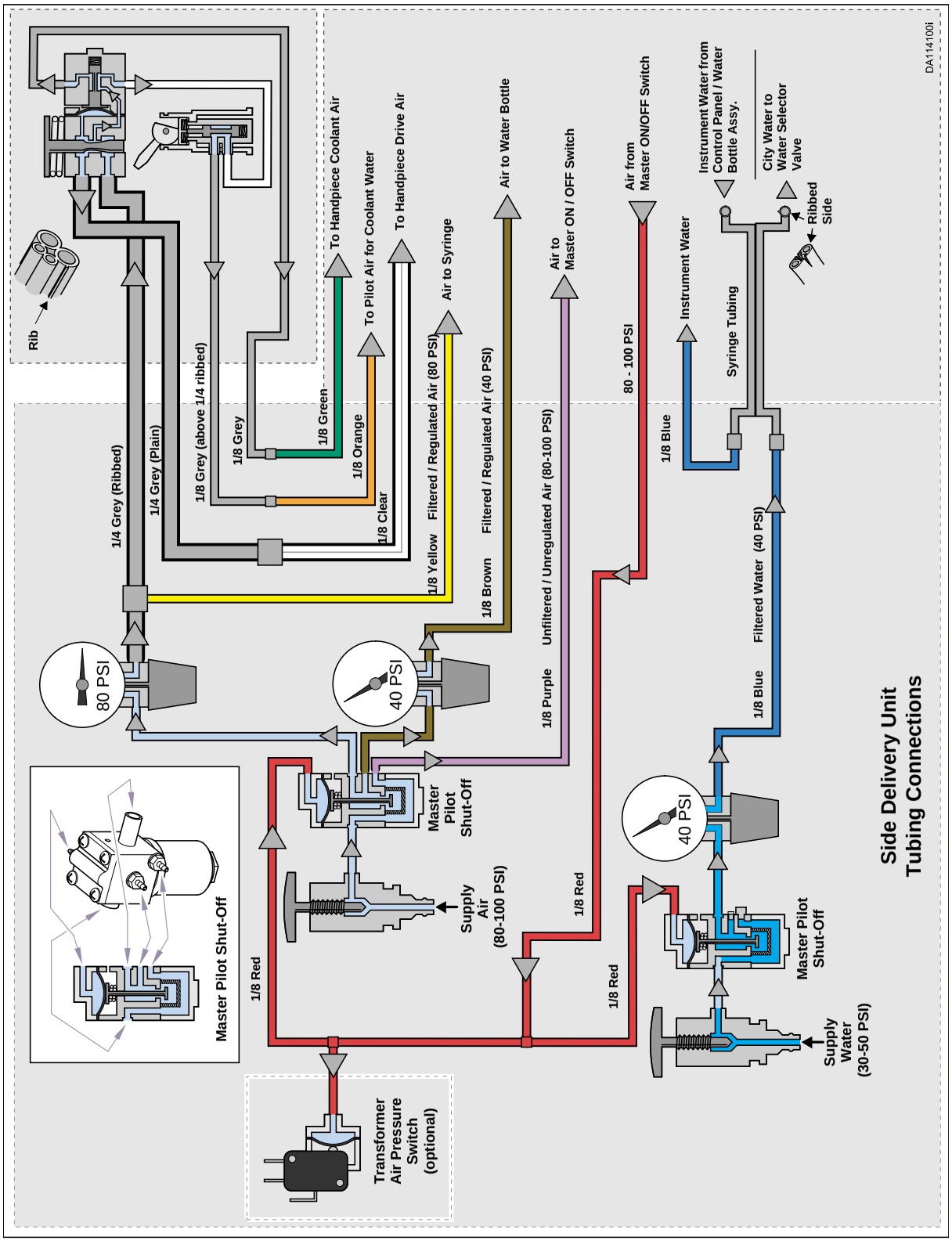


Figure 10. Tubing Connections

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STOP PIN INSTALLATION

(Cabinet & Wall Mtd Units)

(1) Position fixed arm (1, Figure 11) and flex arm (2) as shown.

(2) Lift trim ring (3).

NOTE
There are two possible positions for stop pins. Verify desired operating position before installing stop pins.

(3) Rotate flex arm (2) to desired operating position. Rotation stop screw (4) should be between two holes (A) ***or*** two holes (B); then install two stop pins (5) as shown.

(4) Check for proper operation

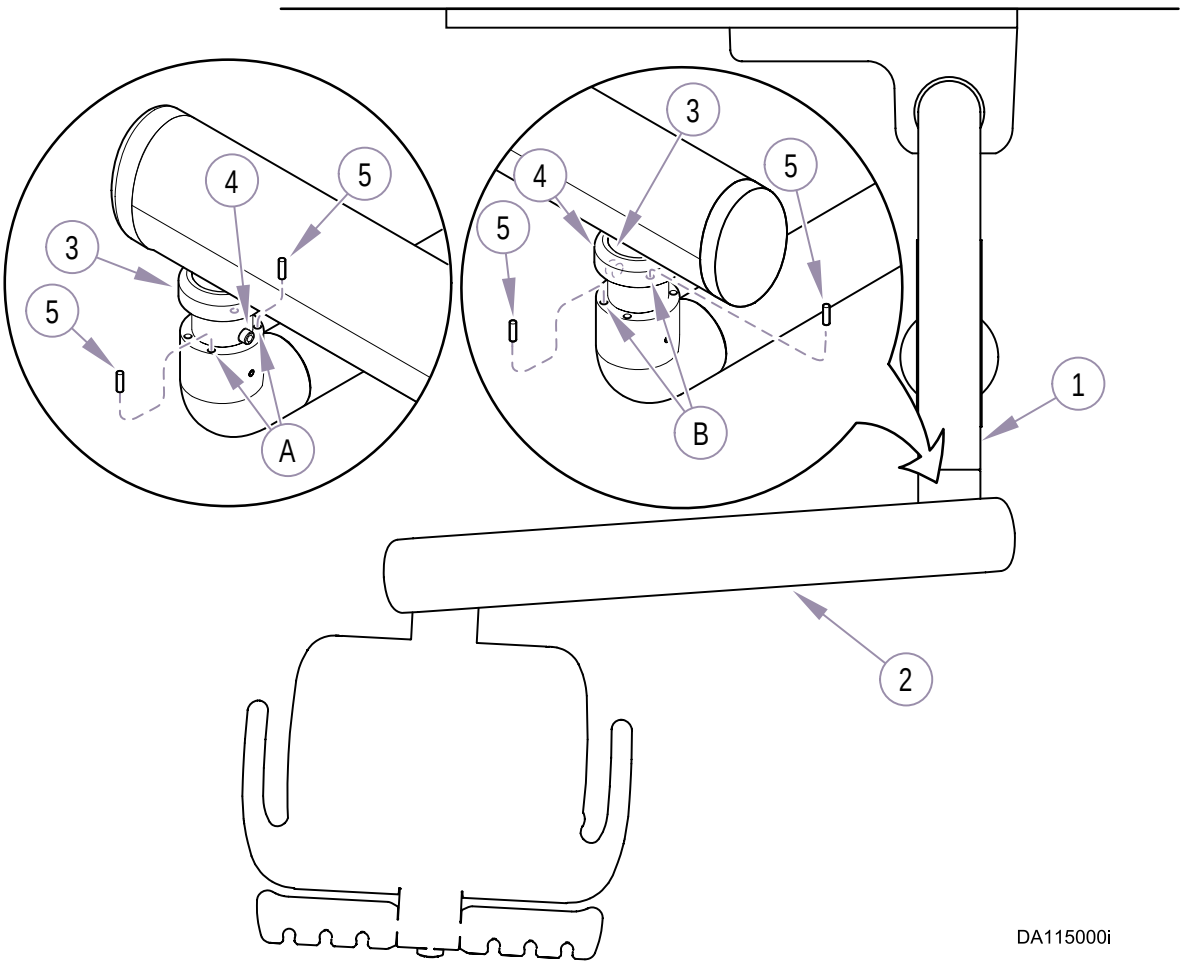


Figure 11. Stop Pin Installation

FLEX ARM LOCK ACTIVATION / LEVELING THE DELIVERY UNIT

NOTE
This procedure should be performed after installation of entire operatory is complete.

Flex Arm Lock Activation

(1) Remove screw (1, Figure 12) and end cap (2) from flex arm (3).

(2) Slide flex arm cover (4) back to access locking pawls (5).

(3) Cut and remove wire tie (6) from locking pawls (5).

(4) Slide flex arm cover (4) into place; then install end cap (2) and secure with screw (1).

Leveling The Delivery Unit

(5) Remove four screws (7) and bottom cover (8).

(6) Loosen three button-head screws (9) slightly.

(7) Place a level on top of delivery unit; then adjust three leveling screws (10) until unit is level.

(8) Tighten three button-head screws (9).

(9) Replace bottom cover (8) and secure with four screws (7).

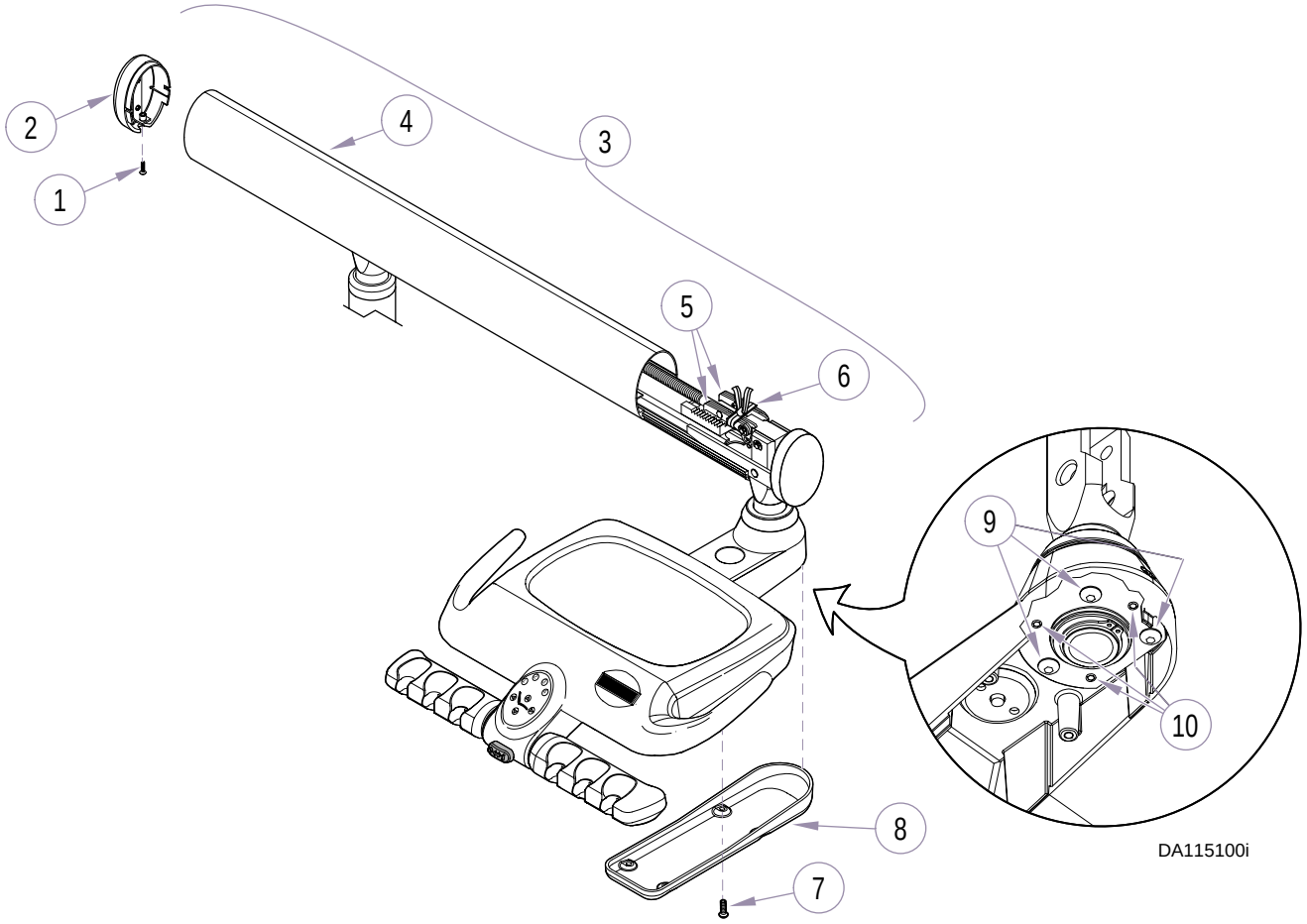
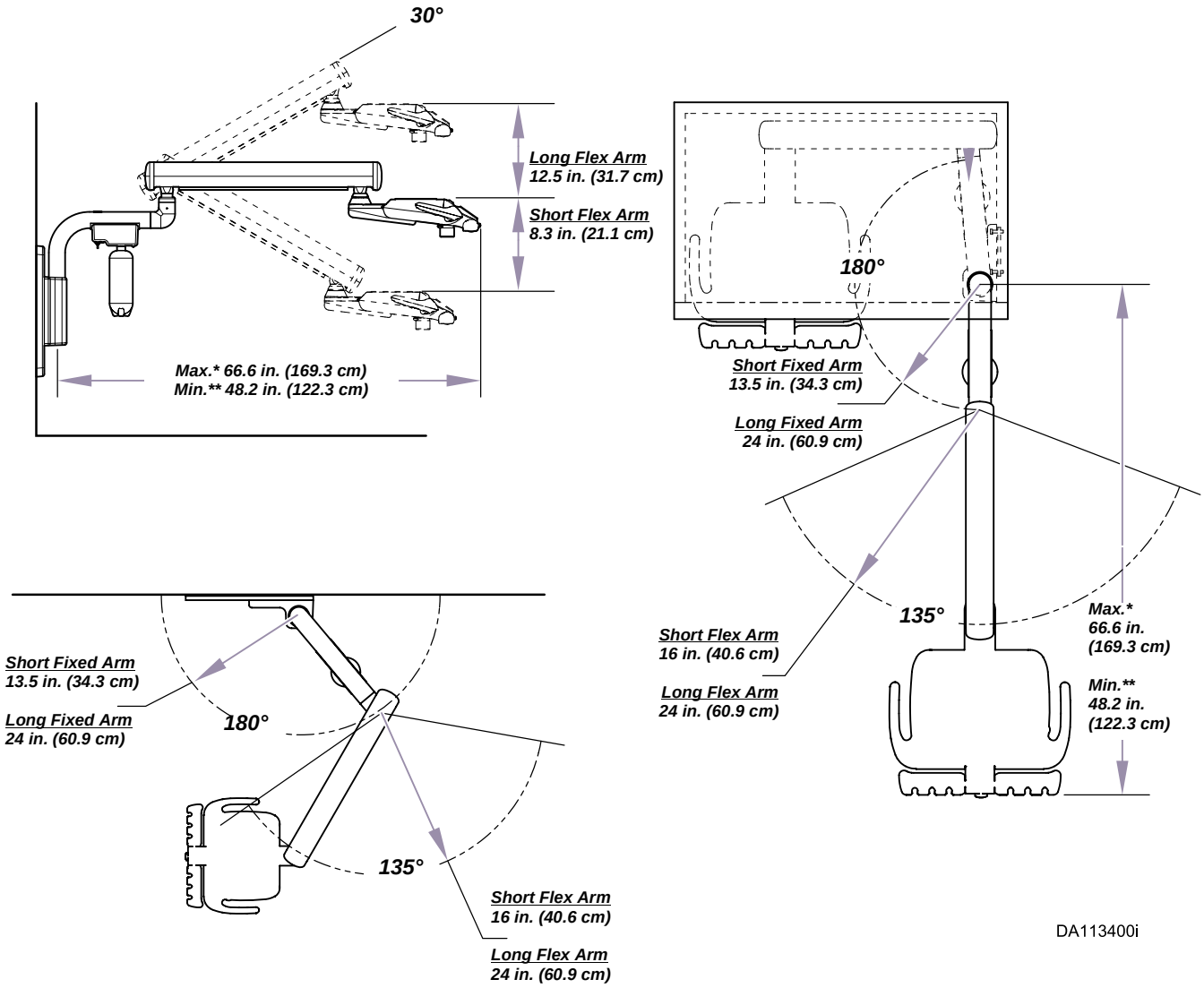


Figure 12. Flex Arm Lock Activation

INSTALLATION CHECKLIST

EQUIPMENT ALERT
Answering “NO” to any of the following questions indicates improper installation or a product malfunction. Check all connections, then refer to the Midmark Dental Delivery System Service & Parts manual for corrective action if necessary.

Yes	No	
		With **Master Switch** ON... *Do all handpieces and syringe function properly when removed from handpiece stations?*
		Does flex arm move upward freely at all times, but down only when unlock button is depressed?
		Does flex arm stay in position without “drifting”?
		Does delivery system move easily at all pivot points?



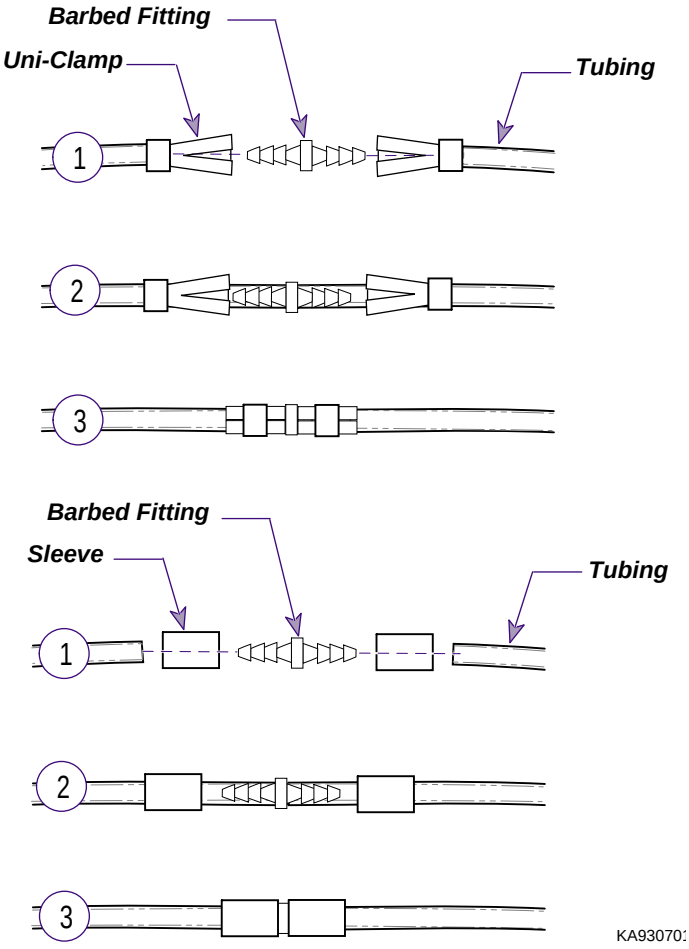
* Measurement w/long fixed arm & long flex arm (Standard w/wall mtd. unit)
** Measurement w/ short fixed arm & short flex arm (Standard w/cabinet mtd. unit)

NOTE: Product can be configured to use either fixed arm w/ either flex arm

TUBING CONNECTORS

When connecting internal tubing to metal barbed fittings during installation, it is necessary to use the plastic retainers included with operatory components.

*For **1/8 in.** tubing use **Uni-Clamp***
*For **1/4 in.** tubing use **Sleeve***



TRANSPORTATION / STORAGE CONDITIONS

- Ambient Temperature Range:.....-22°F to 140°F (-30°C to 60°C)
- Relative Humidity.....10% to 90% (non-condensing)
- Atmospheric Pressure .....500hPa to 1060 hPa (0.49atm to 1.05atm)

TORQUE SPECIFICATIONS

Torque specifications apply to hardware used on components unless otherwise noted in these installation instructions:

Torque Specifications

Hardware Size	Torque Values
#6	11 to 21 inch / lbs. (1.2 to 2.3 N•m)
#8	20 to 30 inch / lbs. (2.2 to 3.3 N•m)
#10	32 to 42 inch / lbs. (3.6 to 4.8 N•m)
1/4 inch	75 to 85 inch / lbs. (8.5 to 9.6 N•m)
5/16 inch	18 to 22 ft. / lbs. (24.4 to 29.8 N•m)
3/8 inch	31 to 35 ft. / lbs. (42.0 to 47.5 N•m)
1/2 inch	50 to 60 ft. / lbs. (67.8 to 81.4 N•m)

SIDE DELIVERY UNIT